

REMARKS

Claims 1-2 and 4-7 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamigawa (U.S. Patent No. 5,307,486), in view of Culik (Dense Multiway Trees ACM Transactions on Database Systems, vol. 6, no. 3, September 1981, pages 486-512). In response, Applicants amended independent claims 1 and 6-7 to clarify that the second data item is moved to the first page when the second page has insufficient available space and the first page has sufficient available space, and respectfully traverse the rejection as it applies to the amended claims.

Nakamigawa is directed to a method for updating an index tree structure of data based on node sizes. Nakamigawa has an index tree structure that uses a buffer rate so that a data process to be performed is selected from a simple insert process, an overflow process, nodes split process, simple delete process, underfold process, and a node concatenation process. Using these processes, the data of the index tree structure can be efficiently processed. In FIG. 4, Nakamigawa further teaches inserting a second data item “B” into an adjacent node, which is a node that follows an existing node. (See Col. 3, lns. 44-49 and Col. 4, lns. 15-28). However, Nakamigawa fails to disclose or suggest inserting data into a page or node that precedes a target node.

Culik is cited by the Examiner as disclosing that each node in a B-tree corresponds to a page where insertion or deletion can be applied to the B-tree, that each node has left and right brothers, and also that a node can be created. Culik does not disclose or suggest inserting data into a page or node that precedes a target node, as now recited in amended claims 1 and 6-7.

In contrast, claims 1 and 6-7 are amended to clarify that the first page, which precedes the second page, receives a second data item when the second page has insufficient available space, but the first page has sufficient available space. That is, as shown in FIG. 8 of the present application at step S14, when insufficient available space exists in either of the preceding and following pages, then in a step S17 a portion or all of the data in a target page is moved to one of the proceeding and following pages. (See Applicants' specification pages 22-23). In this manner, the sequence of operations for inserting an index data item into a leaf page of an index for a database when a new data item is added to the database is improved, since less pages are be added to the database. Thus, a less complicated tree structure is formed. Since the cited references both fail to disclose or suggest inserting data into a page preceding a target page when the following page has insufficient space, withdrawal of the §103 rejection is respectfully requested.

For all of the foregoing reasons, Applicants submit that this Application is in condition for allowance, which is respectfully requested. The Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

Respectfully submitted,

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